

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: INVUE

Report Number: P367850

Luminaire Tested: **MSA-SA3B-740-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367850
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-740-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14734 lumens
Efficiency: N/A
Efficacy: 116.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

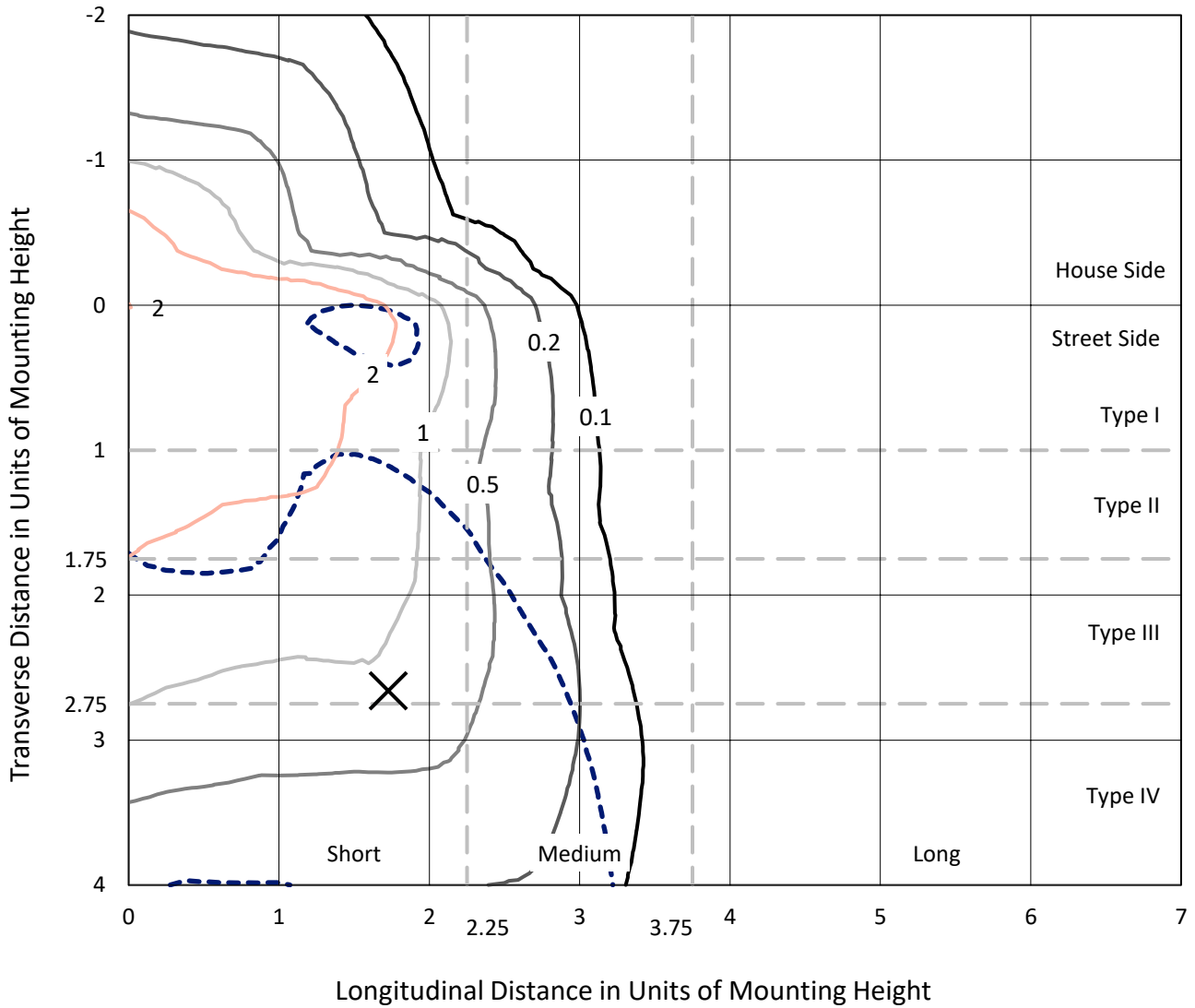
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

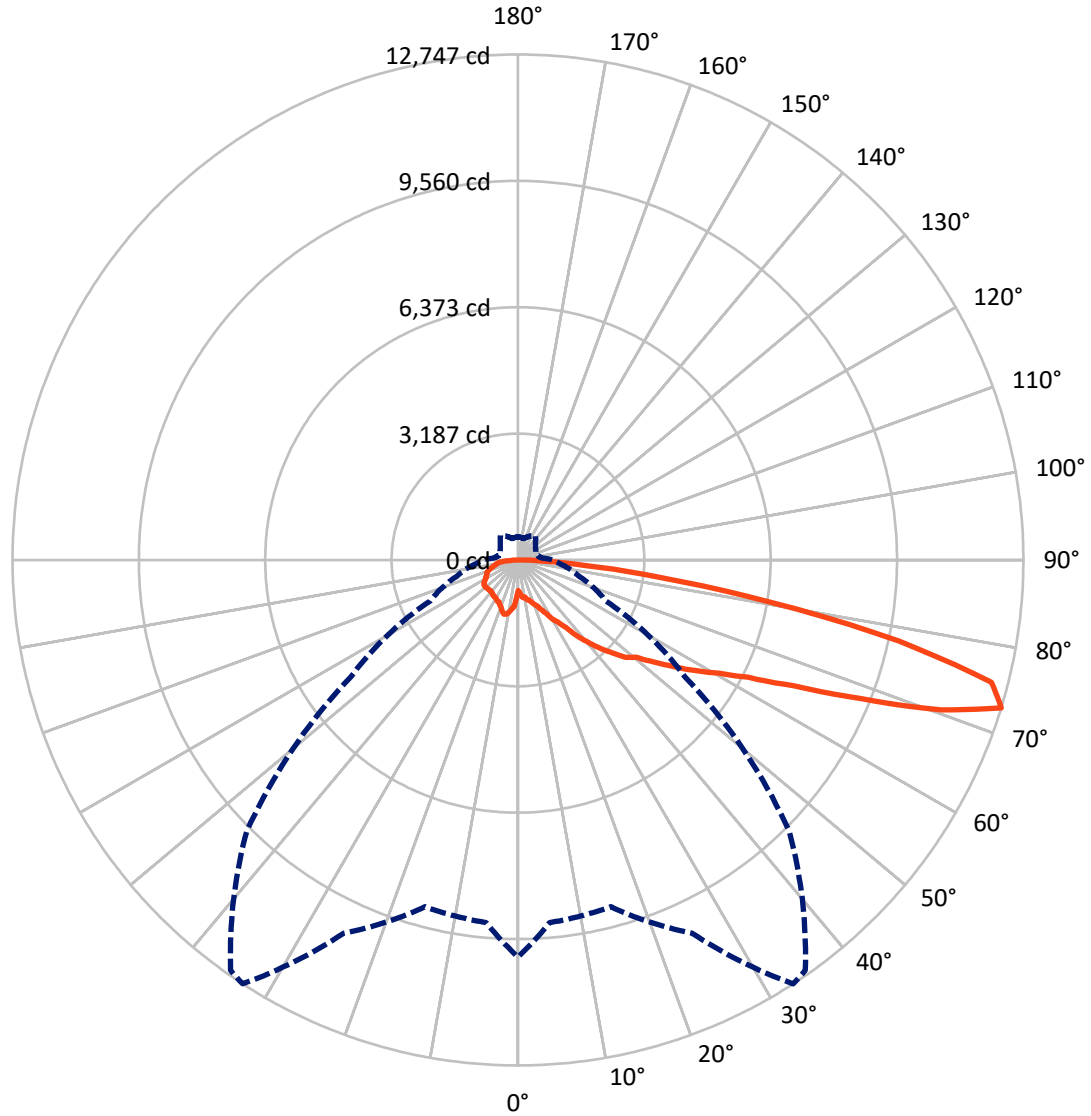
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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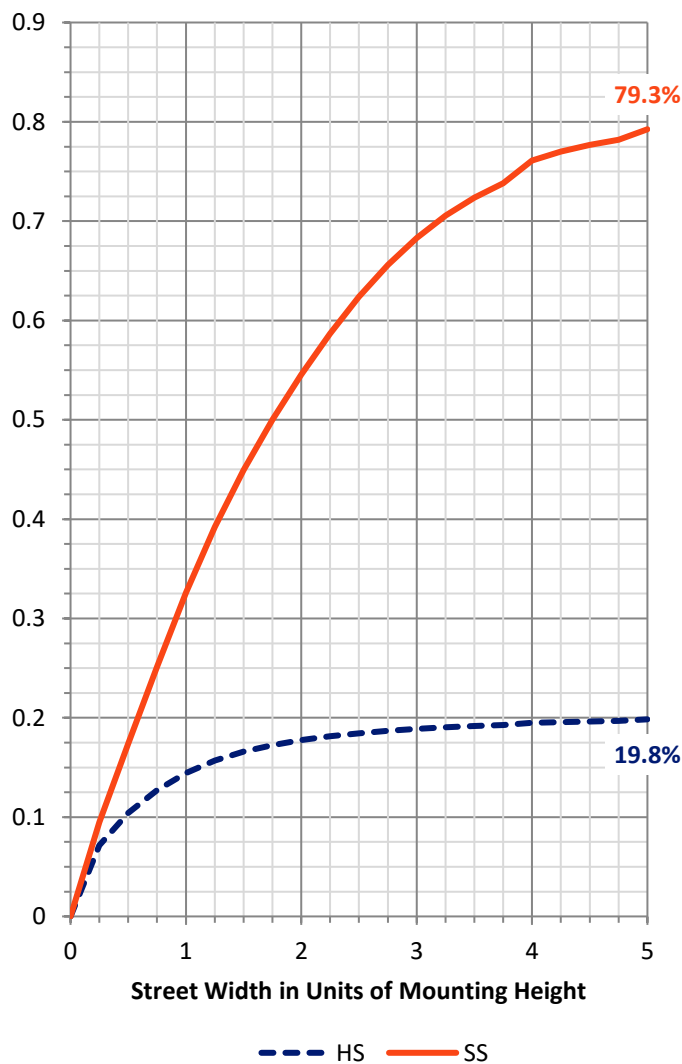
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2980.7	0.0	2980.7
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	11753.3	0.0	11753.3
	% Fixture	79.8	0.0	79.8
Total	Lumens	14734.0	0.0	14734.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.2	0.7
10°-20°	392.6	2.7
20°-30°	715.9	4.9
30°-40°	1211.1	8.2
40°-50°	2014.8	13.7
50°-60°	2956.9	20.1
60°-70°	3782.5	25.7
70°-80°	3077.4	20.9
80°-90°	476.6	3.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	14734.0	100.0
0°-180°	14734.0	100.0

Coefficient of Utilization



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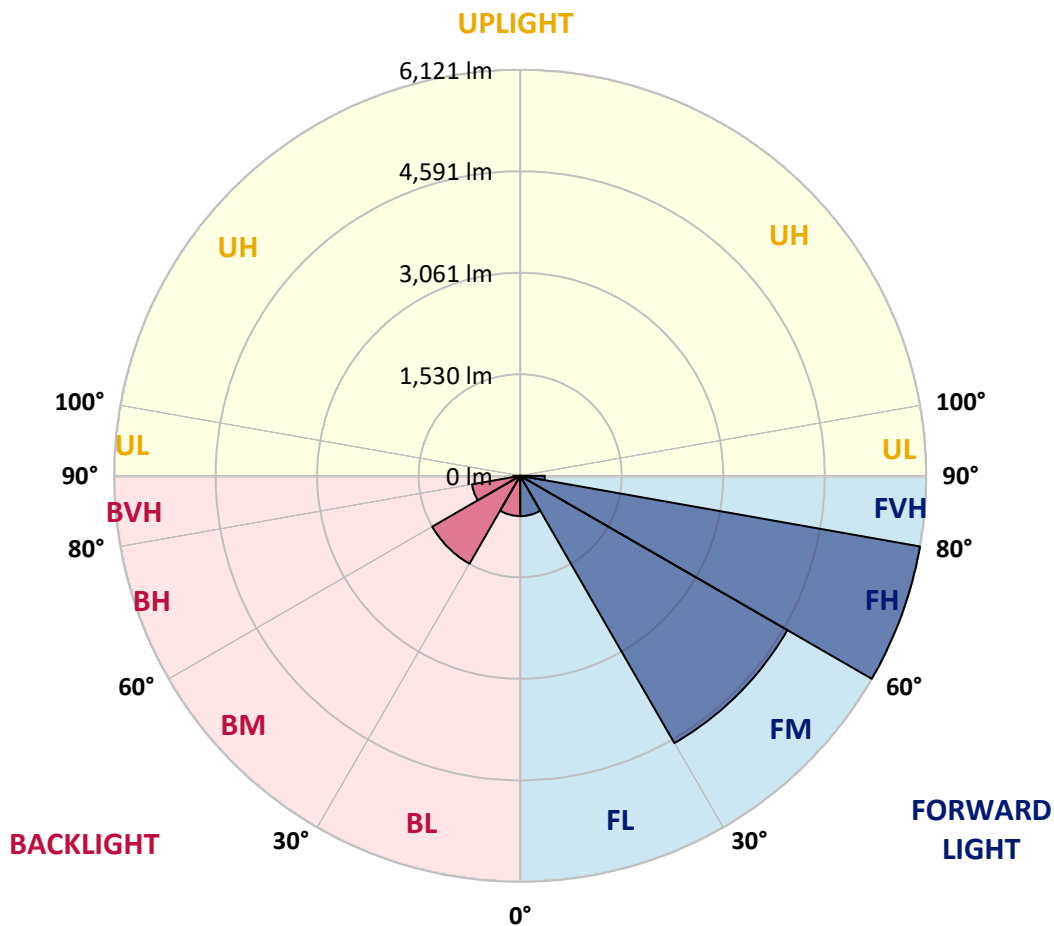
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	608.1	4.1			
FM (30°-60°)	4651.9	31.6			
FH (60°-80°)	6121.4	41.5			G3/7500
FVH (80°-90°)	372.0	2.5			G3/500
BL (0°-30°)	606.6	4.1	B2/1000		
BM (30°-60°)	1530.9	10.4	B2/2500		
BH (60°-80°)	738.6	5.0	B2/1000		G2/1000
BVH (80°-90°)	104.6	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	772.6	772.6	772.6	772.6	772.6	772.6	772.6	772.6	772.6	772.6	772.6
2.5°	875.9	848.4	803.2	801.9	827.0	832.5	849.0	850.2	856.3	846.6	916.2
5°	966.4	937.0	919.3	925.4	913.8	927.8	927.8	968.2	1022.0	1084.3	1172.9
7.5°	987.7	966.4	946.2	961.5	963.9	950.5	963.3	1058.0	1155.2	1217.6	1359.4
10°	945.0	923.6	938.8	943.7	943.1	973.7	1040.3	1116.1	1224.3	1339.2	1415.6
12.5°	937.0	952.3	959.6	968.2	1026.3	1035.4	1136.3	1214.5	1323.3	1424.2	1622.8
15°	1055.0	1075.2	1029.9	1026.9	1045.8	1054.4	1158.9	1237.7	1396.7	1566.0	1744.4
17.5°	1223.1	1230.4	1149.1	1107.5	1121.6	1128.3	1174.2	1273.2	1371.0	1683.9	1906.4
20°	1385.7	1390.5	1237.7	1144.8	1194.3	1201.7	1244.5	1301.3	1378.3	1749.9	2015.8
22.5°	1556.2	1525.0	1357.5	1240.2	1268.9	1270.7	1295.8	1327.0	1436.4	1739.6	2149.1
25°	1742.6	1723.1	1512.2	1399.7	1398.5	1373.4	1374.7	1419.3	1498.1	1850.8	2236.5
27.5°	1990.2	1992.6	1686.4	1625.9	1531.1	1514.6	1432.1	1515.2	1605.1	1852.0	2425.4
30°	2311.1	2251.8	1929.0	1831.2	1737.7	1702.9	1591.0	1661.9	1701.1	1957.8	2630.7
32.5°	2572.1	2554.9	2182.1	2034.2	1881.4	1921.7	1798.2	1735.9	1806.2	2139.9	2941.8
35°	2822.0	2765.8	2449.8	2257.3	2096.5	2072.1	1992.0	2002.4	2045.2	2370.3	3348.3
37.5°	3194.9	3164.3	2828.8	2520.7	2445.5	2345.9	2295.2	2327.6	2293.9	2665.6	3957.7
40°	3611.8	3434.5	3145.4	2870.9	2730.4	2660.1	2677.8	2647.2	2621.6	2996.9	4504.1
42.5°	4010.9	3849.5	3355.6	3232.2	3048.8	3078.1	2981.0	3002.4	3075.1	3466.9	5009.6
45°	4445.5	4096.5	3578.7	3469.9	3338.5	3375.8	3453.4	3430.2	3549.4	4021.3	5485.8
47.5°	4662.5	4330.6	3852.6	3675.3	3673.5	3595.9	4068.3	4119.7	3933.3	4432.0	5969.3
50°	4871.5	4545.1	4056.1	3936.3	3849.5	4015.8	4658.2	4540.2	4280.4	4903.3	6501.0
52.5°	5162.4	4790.2	4289.6	4161.9	4269.4	4423.5	5128.8	5105.6	4620.9	5388.0	6963.1
55°	5384.3	5008.4	4641.1	4522.5	4727.9	4878.8	5608.0	5468.1	4912.4	5743.7	7255.9
57.5°	5773.1	5387.4	5160.0	4896.6	5265.7	5263.3	6070.1	5961.9	5224.2	6035.9	7373.9
60°	6391.0	5938.1	5700.3	5396.5	5792.0	5933.2	6598.2	6286.5	5444.8	6220.5	7161.2
62.5°	7258.3	6720.5	6334.8	6034.1	6516.3	6771.8	7250.4	6523.0	5458.9	6167.9	6601.9
65°	8331.1	7677.0	7171.6	6853.7	7649.5	8014.4	8038.9	6669.1	5329.3	5624.5	5425.9
67.5°	9377.5	8642.2	8114.7	8175.2	9337.1	9510.1	8893.4	6791.4	4633.1	4516.4	3767.6
70°	10066.3	9269.3	8917.8	9559.6	11324.9	11147.6	9585.9	6469.2	3648.4	2927.8	2121.6
72.5°	10014.4	9180.1	9053.5	10382.3	12746.6	12635.9	9670.3	5144.7	2443.7	1600.8	1058.0
75°	8158.7	7510.2	7797.4	9828.6	12337.0	12331.5	8395.8	3184.5	1253.6	822.1	668.7
77.5°	4510.9	4259.0	5103.2	7441.7	9823.1	9873.2	5672.8	1444.3	676.0	582.5	503.7
80°	1580.0	1556.8	2211.4	4015.8	6461.9	6474.1	2638.1	660.7	491.4	440.7	369.8
82.5°	577.6	572.7	916.8	1865.5	3558.0	3550.0	1000.6	411.4	364.3	311.7	243.9
85°	230.4	225.5	419.3	828.2	1634.4	1608.1	388.7	233.5	238.4	185.8	119.8
87.5°	63.6	66.0	142.4	259.2	500.6	463.9	97.8	78.8	96.6	75.8	37.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	772.6	772.6	772.6	772.6	772.6	772.6	772.6	772.6	772.6	772.6	772.6
2.5°	928.5	934.6	874.1	895.5	923.0	937.6	945.0	913.8	924.2	968.2	966.4
5°	1191.3	1166.8	1143.6	1167.4	1151.6	1128.9	1165.6	1163.8	1187.6	1211.5	1217.0
7.5°	1387.5	1355.7	1344.7	1290.9	1237.1	1182.7	1229.8	1259.1	1265.2	1324.5	1349.6
10°	1458.4	1446.2	1450.4	1379.5	1372.8	1378.3	1334.9	1287.9	1316.6	1292.1	1310.5
12.5°	1622.2	1652.8	1577.0	1528.7	1524.4	1490.8	1404.0	1373.4	1341.0	1374.7	1357.5
15°	1753.6	1810.5	1729.2	1644.2	1548.2	1496.3	1422.3	1375.9	1354.5	1361.8	1341.0
17.5°	1946.2	1999.3	1792.7	1662.5	1563.5	1487.1	1374.0	1275.0	1327.6	1331.9	1308.0
20°	2073.9	2077.6	1814.1	1617.3	1528.1	1395.4	1285.4	1198.6	1259.1	1320.9	1347.8
22.5°	2198.6	2171.1	1840.4	1581.2	1399.1	1270.7	1217.0	1211.5	1256.7	1308.6	1314.8
25°	2292.1	2296.4	1855.7	1567.8	1323.3	1148.5	1148.5	1188.2	1228.0	1351.4	1345.3
27.5°	2518.9	2352.0	1796.4	1506.1	1218.2	1077.0	1149.1	1202.3	1221.2	1355.1	1368.5
30°	2683.9	2575.1	1808.6	1400.3	1111.8	1043.4	1102.7	1169.3	1221.8	1376.5	1371.6
32.5°	2960.8	2668.0	1837.4	1251.8	1032.4	1030.5	1083.1	1153.4	1216.3	1353.3	1360.6
35°	3267.0	2941.8	1757.3	1138.7	1013.4	1023.2	1091.0	1119.2	1193.1	1344.1	1350.8
37.5°	3833.6	3084.9	1706.6	1051.3	1001.2	1029.3	1055.0	1098.4	1172.9	1298.3	1342.3
40°	4166.1	3379.5	1518.3	1000.6	975.5	1024.4	1037.3	1073.9	1114.3	1243.2	1271.4
42.5°	4603.8	3472.4	1357.5	944.3	962.7	1004.2	1042.8	1051.9	1078.8	1156.4	1207.8
45°	4968.7	3542.1	1187.0	899.1	919.3	1048.9	1051.3	1047.0	1042.1	1070.9	1113.0
47.5°	5346.4	3729.1	1029.9	849.0	902.8	1085.5	1055.6	1016.5	996.3	1000.0	1039.1
50°	5763.3	3864.8	918.7	808.0	906.5	1085.5	1076.4	985.3	945.0	934.6	975.5
52.5°	6130.0	3880.7	834.3	775.0	891.2	1048.3	1090.4	965.7	897.9	872.8	911.3
55°	6329.9	3679.6	773.2	745.1	852.1	1014.6	1083.1	954.7	841.1	822.1	856.3
57.5°	6325.6	3345.9	721.3	703.5	807.4	967.6	1042.1	894.8	806.2	795.2	828.8
60°	6097.6	2954.7	681.5	669.3	761.6	899.1	968.8	855.7	772.6	767.1	803.8
62.5°	5580.5	2550.7	643.0	633.2	718.8	850.8	934.0	812.3	737.8	737.1	772.0
65°	4570.2	2047.6	607.0	604.5	679.1	803.2	901.0	775.6	701.7	713.9	749.4
67.5°	3149.1	1438.8	568.4	575.8	642.4	757.3	875.9	751.2	663.8	688.9	720.6
70°	1727.9	889.9	525.7	540.3	595.9	704.1	836.8	711.5	614.3	652.8	674.8
72.5°	878.9	593.5	472.5	495.7	539.1	625.9	763.4	654.0	561.1	575.8	587.4
75°	590.4	446.8	413.2	438.9	470.0	551.3	677.2	600.2	510.4	508.5	521.4
77.5°	446.2	349.0	350.8	380.2	400.4	484.7	608.8	555.0	467.6	463.3	482.3
80°	326.4	264.7	282.4	312.9	331.3	435.2	564.2	504.9	409.5	392.4	408.3
82.5°	216.4	187.6	209.0	239.6	254.3	363.7	512.2	428.5	333.7	290.3	292.8
85°	102.1	98.4	124.7	139.4	158.3	225.5	383.2	296.4	212.7	176.0	184.0
87.5°	23.2	31.2	41.0	40.3	47.1	60.5	119.2	83.1	61.7	42.2	28.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)